

U.S. Appl. No. 10/715,892
Page 2

promoting the nucleation of equiaxed grains as the nugget solidifies. Figures 4 and 5 of the accompanying drawings depict a spot weld between two sheets of AA5182-O type aluminum alloy sheets in which the weld nugget has been inoculated with the compound Al- Ti- B. It can readily be seen from Figures 4 and 5 that the volume of equiaxed grain 18 is substantially broader, and the area 16 of columnar grain is substantially reduced compared to the weld 14 shown in Figure 1. The inoculant should include Ti or a Ti compound, or alternatively an Na or Na based compound. Examples of Ti compounds yielding the desired results include: Al + Ti; Al + Ti + C; Ti- B; Al + Ti- B; Al-Ti-B; Al- Ti- B- Re; and, Al- Ti- C.

Suitable sodium based compounds may include, for example: ~~NaBF₄, Na₂TiF₆, NaF~~ NaBF₄, Na₂TiF₆, NaF and NaCl.

Please replace Paragraph [0023] with the following rewritten paragraph:

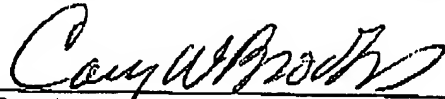
[0023] The inoculant is applied to one or both of the facing surfaces of the workpieces to be welded. The inoculant may be in the form of a liquid or paste that is sprayed or brushed onto the workpiece surface, or the inoculant may be incorporated into a carrier formed into a film or foil which is interposed between the workpiece surfaces before they are clamped and welded. Testing has shown that in welding AA 5182-O aluminum alloys, an inoculant material comprising ~~AlTi₃B₁Re~~ AlTi₃BRe provides superior results. In welding AA 6111-T4 aluminum alloy, an inoculant comprising ~~AlTi₃C_{0.15}~~ AlTi₃C_{0.15}

U.S. Appin. No. 10/715,892
Page 3

was found to provide satisfactory results.

Respectfully submitted,

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